

Ship-to-Shore Insertion of Reconnaissance or Infestation Teams

by GySgt J. Torres

The author points out how the Corps can combine current capabilities with a future concept.

One of the traditional roles of reconnaissance Marines during amphibious operations has been to move ashore prior to H-hour to collect information in support of the landing force commander. Marines would traditionally mark landing sites for incoming waves of assault amphibious vehicles or other landing craft. Reconnaissance Marines would also be employed in this advance force role to mark landing sites and conduct initial terminal guidance for helicopters. However, as "realtime" satellite imagery, unmanned aerial vehicles (UAVs), and precision Global Positioning System technology become available to the embarked landing force the need to insert reconnaissance elements into landing areas prior to H-hour is being

proportionally reduced. Technology is slowly replacing the traditional ground reconnaissance role of conducting terminal guidance for helicopters or beach landing craft, or relaying pre-H-hour enemy information to the landing force. We may no longer need a Marine on the ground relaying enemy information via high-frequency radios to the landing force afloat prior to H-hour if this information can be "downloaded" directly into the landing force operations center from a satellite or UAV orbiting above and, maybe someday, directly

into an inbound landing craft or helicopter. This technology enhancement may not necessarily mark the end of the Marine Corps' need for ground reconnaissance, but rather a significant shift in the conventional employment of reconnaissance units.

The concept of ground reconnais-

sance during advance force operations can be easily translated into the principle of infestation tactics employing current training, technology, and equipment—hence integrating a future warfighting concept with an already proven technique with minimum additional cost. As the landing begins, reconnaissance Marines may not only relay information as has been traditionally done, but may also designate targets to the first wave of assault aircraft. Marines could, based on the commander's intent, carefully identify, and employing available laser pointers, "lace" Marine attack aircraft and "point" targets on the ground as the landing unfolds. With this concept in mind, it may still be advantageous to clandestinely insert Marines ashore prior to H-hour to allow them the opportunity to maneuver to vantage points where they can best observe the area of operations and at the right time manifest themselves in the form of forward air controllers. The success of this "here and now application" (MCG, Sep97, p.71) of the infestation operation would be greatly dependent on a stealthful and uncompromised insertion. In fact, the compromise of the insertion may signify the beginning of a counterreconnaissance effort and the defeat of the infestation initiative. To execute this insertion,

Marines operating as part of an amphibious ready group (ARG) afloat may conduct a helicopter, parachute, or waterborne infiltration. Among these, the waterborne insertion may present the best chance of defeating current technology, as swimmers can remain outside of the line of sight (LOS) of any night vision or thermal imagery device until reaching the intended landing site.

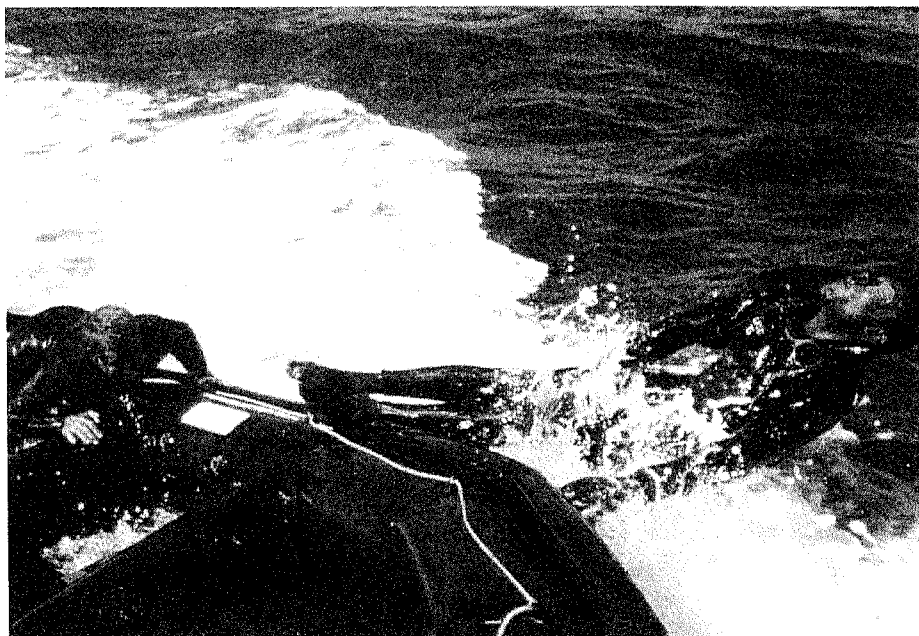
The process of a waterborne or amphibious insertion would require an over-the-horizon approach with a recommended two-phase movement.



Photo by Sgt Jesse Patents

During Phase I, the insertion team, embarked aboard an ARG, would be required to launch from distances of at least 55 nautical miles (nm). This initial standoff may be necessary to allow the ship to maintain a safe distance from a coastal defense, medium-range, Silkworm FL-3-type weapon system. The next consideration during this phase should be the transit time. Our current combat rubber raiding crafts (CRRCs) are able to maintain speeds ranging from 8-12 knots when using a 55 horsepower Johnson outboard motor (*MCG*, Mar97, p. 30). In relatively calm sea states (sea state 3 or less) the planning speed for the reconnaissance delivery boat should approximate 10 knots. We can approximate the transit time of the insertion craft employing the formula time equals distance divided by speed ($T=D/S$). Departing from 55 nm, and transiting at the speed of 10 knots, the insertion team may arrive just outside of the LOS range of any shorebased observer (*MCG*, Jun97, p.32) in approximately 5.5 hours.

During Phase II to maintain the secrecy of the insertion in a hostile technology-rich environment, the infestation or reconnaissance team should be released from their CRRC at approximately 3.5 nm (or approximately 7 kilometers (km) from their intended beach landing site (BLS), and swim in for the remaining distance. This will preclude the CRRC from projecting a thermal signature visible to any observer on the intended BLS. The unit commander should determine whether this swimmer approach must be conducted on the surface or underwater. This determination should be made based on the surface conditions. For instance, any wave effect may camouflage the swimmers in their approach to the beach. However, if the intended landing site is located in a partially enclosed bay or harbor, such as it was during Operation SUPPORT/UPHOLD DEMOCRACY in Cap Haitian, Republic of Haiti, in 1994, no wave action may be present and an underwater approach may be required. If conducted underwater, and employing a planning speed of 0.8 knots, the 3.5 nm to the BLS would be



conducted in approximately 4.3 hours. The entire operation from launching to arriving on the beach would take approximately 9.8 hours. The slow transit could be considerably shortened by adding to the Marine Corps' inventory a faster boat and a swimmer propulsion device with adequate range and capable of being embarked aboard an ARG.

The swimmers landing is normally followed by a tactical beach crossing where the team transitions from the water to the hinterland. This is the most vulnerable moment for the element, since at this point it is directly exposed to observation. The team must move rapidly, yet undetected, across the beach to maintain the tactical surprise and ensure their survivability. The Marines must move to a safe area, cache their swimmer sets, and prepare to move inland. The time consumption during this stage of the insertion is difficult to estimate, since it will depend on the amount and type of equipment that the swimmers carry, as well as the proximity of contending forces. For example, Marines operating in a built-up area may have to move slower. In the winter swimmers may have to cache wetsuits and don utilities, therefore adding to their loitering time in the vicinity of the BLS.

If the tactical beach crossing is the

most exposed, the most physically challenging portion of the insertion may be the underwater swim, should it be required. Underwater operations are not new to Marines. The Marine Corps has trained a limited number of men in underwater operations since the early 1960s. During the Vietnam war, SCUBA (self-contained underwater breathing apparatus)—qualified Marines inspected bridges for mines and boobytrap emplacements. More recently, the underwater mission of the Marines has evolved greatly, encompassing a series of new technologies and tactical scenarios. Marines work and train underwater, not only to inspect bridges or structures, but to use the sea and its confines as another avenue of approach into their objective areas. Formal underwater tactical training for Marines is conducted at the Marine Corps Combatant Diver Course, at Panama City, FL. Marines are trained to infiltrate underwater in two-, four-, or six-man teams. This course was developed in 1993, and since its conception, more than 500 Marines have been trained in underwater operations. As a result, the capability to infiltrate underwater is available to the Marine air-ground task force commander.

The concept of employment of Marine Corps combat divers is not currently defined in any Marine Corps

doctrinal publication. It is widely accepted, however, that underwater swimmers are more able to conduct a clandestine approach and not be discovered by local noncombatants, or shorebased observers equipped with night-vision or thermal imagery devices. The underwater approach enhances the Marines survivability. We should further consider that in urban environments civilian populations may extend to the shoreline, and the illumination of local housing and roadways reflecting from the water may pose a significant increase to the threat of detection of the approaching surface swimmers. Marines moving underwater can arrive on target virtually undetected.

The feasibility of this scenario lies not only in the training that the Marines currently receive, but in the availability of diving equipment in the Marine Corps inventory. The center piece of the Corps' diving equipment is the LAR V Underwater Breathing Apparatus (UBA). A diving apparatus of German design, the LAR V UBA is a 100 percent closed-circuit oxygen rig that, utilizing a carbon dioxide (CO₂) absorbent, recirculates the gas the diver breaths while producing no visible bubbles on the surface. This lack of bubbles, or trail, enables the Marines to approach their objectives undetected. The duration of the rig is limited by two factors: the oxygen supply, and the duration of the absorbent. Currently, a Marine diver may be exposed to a total of 4 hours of oxygen breathing underwater in a 24-hour period (*USN Diving Manual, Vol 2*). Notwithstanding, the duration of the CO₂ absorbent is adversely affected by the water temperature and is always less. For example, at 70 degrees Fahrenheit the canister duration for the LAR V UBA is 2.1 hours. Hence, an underwater approach of 4 hours during a 7 km insertion (and if required a 7 km extraction) may not be realistic nor supportable with this underwater swimming system.

To overcome this equipment shortfall, Marines employ what is commonly referred to as the "turtleback" technique. The turtleback is a swimming profile that enables the diver to swim

on the surface for a long distance in his approach to the objective, while conducting a shorter underwater transit. Employing the tides and currents to his advantage, a Marine may conduct a 6 km surface swim and a 1 km underwater swim arriving on target undetected with a limited oxygen exposure. The surface swim portion of this approach may be conducted at a speed of 1.2 to 1.5 knots. However, the underwater portion is conducted at 0.8 knots. Hence, a distance of 7 km may be traversed by our clandestine swimmers in approximately 3 hours. Swims to this range are routinely conducted during combatant diver training. However, the overall exposure normally degrades the physical readiness of the Marines, ultimately reducing their effectiveness ashore—especially noticeable in a cold water environment.

One of the most critical areas in this process is the limited amount of equipment that Marines can carry while employing the underwater insertion technique. Marines are able to swim with their equipment, both on the surface and underwater, by making their equipment neutrally buoyant. This neutrality in the water signifies that the load will neither sink, nor float. It will maintain its relative position in the water unless it is moved by the swimmer. This is currently achieved with waterproofing bags and additional weight as required. A swimmer bundle may in fact weigh twice as much as a normal pack due to the added weight necessary to make the load "neutral." The equipment Marines carry during this type of insertion is normally limited to a rifle, load-bearing vest, and a neutrally buoyant bundle containing a small hand-held radio, night vision equipment, and, as the mission may require, a camera or limited amounts of explosives. The amount of rations and water is also very limited. In this instance, weight becomes secondary to size, as Marines concern themselves more with the size of the bundle and the "drag" effect that slows down their swimming speeds. As a result of the added weight, the amount of time the swimmers are exposed to observation

as they exit the water and cross the beach is increased. This is detrimental to the survivability and tactical efficiency of the swimmer team.

Several factors may reduce the distance a reconnaissance or infestation team may have to transit in their approach to a hostile BLS. The absence of antiship missiles in an operational area may allow an ARG to reduce its standoff distance from an intended BLS. The lack of a thermal imagery threat may allow a CRRC to move in closer to the beach before deploying the swimmers, and a surf may enable the swimmers to remain on the surface without being detected. Such reconnaissance or infestation teams are currently in place throughout the world with each of our Marine expeditionary units (MEUs). Two reconnaissance platoons generally deploy with each MEU. A force reconnaissance platoon, normally composed of two six-man teams, and a division reconnaissance platoon composed of three teams, provide the MEU commander with five potential infestation teams already trained and equipped to infiltrate a hostile shore on the surface or subsurface. The assets, training, and techniques involved in the infiltration and operation of either a reconnaissance or infestation team are comparable. And even though it is arguable that a total shift in the concept of employment of the Marine Corps' reconnaissance units may be premature, or not required at all, our current reconnaissance training and equipment allows for the flexibility required to land Marines ashore before H-hour to gather information or engage targets with supporting arms at the appropriate time.

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